

The preferred embodiment (Fig 2A as cited by the Examiner) of Lomolino discloses a five chambers of heat exchanger 100 are separated by four individual thin walls, underneath the wall structure 140, and "underneath each of the five chambers, is located a very thin and finely spaced metal mesh plane." "The mesh structure 130 traverses the entire bottom area of the base 110 and therefore allows for coolant condensation and movement within and between (1.e., beneath) the five chambers." (Column 9, lines 22- 35). The mesh plane 130 has two functions. It acts as a condenser device for the low boiling point liquid and also act as a flow channel for the coolant liquid. (Column 10, lines 33 -35). On contrary to Lomolino, Applicants design an improved supporting structure for a planar heat pipe by power metallurgy sintering the support member with the upper lids and the lower lid. Meantime, Kroliczek discloses a flat capillary evaporator has the structure integrity to accommodate high-pressure working fluids, while avoiding the bulky mass of support structures such as ribs or thick walls. (Column 4, lines 14 – 17). Kroliczek's invention is to get ride of any supporting structure used in the current invention. In addition, the Examiner cites that "the opposed planar plates of the evaporator are brazed or sintered to opposing sides of a metal wick." However, the liquid superheat wick of Kroliczek is a structure of a continuous in liquid flow direction, with sufficiently small pore size to prevent nucleation of superheated liquid inside the wick. (Column 9, lines 15-19). Apparently, the wick of Kroliczek has different function and structure from the support member has in the present invention.

"When a rejection depends on a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the references." In re Rouffet, 149 F.3d 1350, 1355 (Fed. Cir. 1998). Stated another way, the prior art as a whole must "suggest the desirability" of the combination. In re Beattie, 974 F.2d 1309, 1311 (Fed. Cir. 1992) (internal quotation omitted); Winner Int'l Royalty Corp. v. Wang, 202 F.3d 1340 (Fed. Cir. 2000) ("Trade-offs often concern what is feasible, not what is, on balance, desirable. Motivation to

combine requires the latter.” (emphasis added)). The source of the teaching, suggestion, or motivation may be “the nature of the problem,” “the teachings of the pertinent references,” or “the ordinary knowledge of those skilled in the art.” *In re Rouffet*, 149 F.3d at 1355.

The standard for obviousness is described in a recent case, *In re Dance*, 48 USPQ2d 1635 (CAFC 1998), as follows.

To establish a *prima facie* case of obviousness based on a combination of the content of various references, there must be some teaching, suggestion or motivation in the prior art to make the specific combination that was made by the applicant. *In re Raynes*, 7 F.3d 1037, 1039, 28 USPQ2d 1630, 1631 (Fed. Cir. 1993); *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). Obviousness can not be established by hindsight combination to produce the claimed invention. *In re Gorman*, 933 F.2d 982, 986, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991). As discussed in *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143, 227 USPQ 543, 551 (Fed. Cir. 1985), it is the prior art itself, and not the applicant's achievement, that must establish the obviousness of the combination. *In re Dance*, 48 USPQ2d 1635, 1637 (CAFC 1998).

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Nowhere in Lomolino and Kroliczek teaches or discloses the support member of claims 1-4.

Claim 1 of the present invention cites:

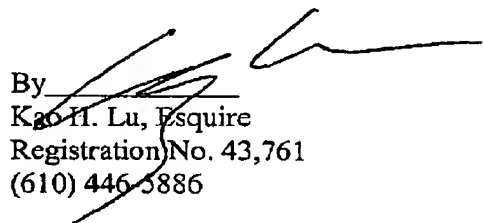
1. An improved supporting structure for a planar heat pipe, comprising: a housing, including an upper lid and a lower lid engaged with each other to form a hollow chamber allowing a work fluid to be introduced therein; and a support member, includes a planar member perforated with a plurality of perforation regions, the support member **being sintered with the upper and the lower lids in the hollow chamber by power metallurgy.**

(Emphasis added)

If the Examiner believes that a further telephonic interview will facilitate allowance of the claims, he is respectfully requested to contact the undersigned at (610) 446-5886. For the reasons stated above, Applicants respectfully assert that the pending claims are in condition for allowance. Reconsideration and allowance of the pending claims are respectfully requested.

Respectfully submitted,

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